

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows.

1. (Currently Amended) A functional roll film comprising:

a transparent plastic film having gas barrier properties, and having an inorganic oxide layer on at least one surface, wherein the maximum thickness of the inorganic oxide layer is equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer among layer thickness values measured in one roll unit of the plastic film, and said one roll unit contains film having a width of at least 400 mm and a length of at least 4,000 m;

~~plural characteristic X-ray measuring means installed so as to cover the plastic film in the transverse width direction of the plastic film at a predetermined spacing between adjacent characteristic X-ray measuring means; and~~

~~control means in communication with the plural characteristic X-ray measuring means for controlling an evaporation condition for the inorganic oxide layer based on thickness measurement data of the inorganic oxide layer measured by the plural characteristic X-ray measuring means to thereby cause the maximum thickness of the inorganic oxide layer in the one roll unit to be equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer among layer thickness values measured in the one roll unit.~~

2. (Previously Presented) A functional roll film according to claim 1, wherein said inorganic oxide layer comprises a composite oxide having at least two components, wherein the difference between a maximum wt% and a minimum weight of one component of the composite oxide in said one roll unit of the plastic film is within 20 wt%.

3. (Presently Presented) A functional roll film according to claim 1, wherein said one roll unit of the plastic film contains film having a width of at least 1,000 mm and a length of at least 15,000 m.

4-19 (Canceled)

20. (New) A process for producing a functional roll film, comprising the following steps:

providing a plastic film, having formed an inorganic oxide layer on at least one surface of the plastic film, said plastic film having transparency and gas barrier properties and being windable;

obtaining data of the thickness of the inorganic oxide layer formed on the plastic film running in a vacuum chamber in a transverse (TD) and a longitudinal (MD) direction of the plastic film by a plurality of X-ray measuring means disposed at predetermined distances from one another in the transverse direction of the plastic film, wherein the thickness measurement by the X-ray measuring means is carried out continuously; and

controlling by a control means a heating means for heating and evaporating an evaporation material for the inorganic oxide layer based on said data of the thickness of the inorganic oxide layer, such that an evaporation rate of the evaporation material is controlled in both the transverse (TD) and the longitudinal direction (MD), so that the maximum thickness of said inorganic oxide layer is equal to or less than 1.5 times the minimum thickness, said maximum thickness being the thickness of the thickest portion and said minimum thickness being the thickness of the thinnest portion of the thickness measured in one roll unit.